

**Notice of Allowability**

Application No.

09/943,507

Examiner

Tianjie Chen

Applicant(s)

OHTOMO ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on 03/20/2006.
2. ☒ The allowed claim(s) is/are 38-41, 43-47, 49-53 and 55-58.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**TIANJIE CHEN**  
**PRIMARY EXAMINER**

### **DETAILED ACTION**

#### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/20/2006 has been entered. Claims 38-41, 43-47, 49-53, 55-58 are pending and found allowable.

#### ***Reasons for Allowance***

2. The following is an examiner's statement of reasons for allowance:
- With regard to independent claims 38 and 50, as stated in the office action mailed on 12/19/2005, as the closest reference Sasaki (US 6,624,971) shows a thin film head having a reading pad and a recording pad comprising: an upper magnetic pole having a first width at an air bearing surface and a second width which is larger than the first width at a first depth position from the air bearing surface; a lower magnetic pole having a lower magnetic main layer; and a projection step portion above the lower magnetic main layer ; and an upper magnetic pole top layer recessed from the air bearing surface; : a non-magnetic insulating layer on the lower magnetic main layer, which is formed at an opposite side to the air bearing surface; wherein the projection step portion includes one portion which faces the upper magnetic pole, and another portion which is formed so as to extend from a second depth position from the air bearing surface to a third depth position from the air bearing surface and

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having a part which does not face the upper magnetic pole; **but fails to show** that the upper magnetic pole has a third width at a fourth depth position which is defined by a closest edge from the air bearing surface of a second insulating layer; wherein the second and third depth positions are provided between the fourth depth position and the air bearing surface: wherein a fourth width at the second depth position of the projection step portion is larger than a width in a track width direction of the projection step portion at the air bearing surface, wherein the first, second, third, and fourth width are widths in the track width direction; and wherein a distance from the air bearing surface to the second depth position is shorter than a distance from the air bearing surface to the first depth position.

- With regard to independent claim 44, as stated in the office action mailed on 12/19/2005, as the closest reference Sasaki (US 6,624,971) shows a thin film head thin film head having a reading pad and a recording pad comprising: an upper magnetic pole having a first width at the air bearing surface and a second width which is larger than the first width at-from a first depth position from the air bearing surface; a lower magnetic pole having a lower magnetic main layer, a lower magnetic pole front end portion on the lower magnetic main layer, and a projection step portion above the lower magnetic pole front end portion; and a non-magnetic insulating layer on the lower magnetic main layer, which is formed at an opposite side to the air bearing surface; wherein the projection step portion includes one portion which faces the upper magnetic pole, and another portion which is formed from a second depth position to a third depth position from the air bearing surface and having a pad which does not face the

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upper magnetic pole; and wherein a distance from the air bearing surface to the second depth position is shorter than a distance from the air bearing surface to the first depth position, and wherein widths of the upper magnetic pole in the track width direction are equal from the air bearing surface to the second depth position; but **fails to show** that and wherein widths of the upper magnetic pole in the track width direction are equal from the air bearing surface to the **first** depth position.

- Applicant asserts: this invention can reduce the leakage flux from the upper magnetic pole front end layer, which is concentrated in the vicinity of the end portion of the floating surface of the lower magnetic pole front end portion, thereby reducing the medium in-plane magnetic field in the off-track position (Specification, p. 38).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
TIANJIE CHEN  
PRIMARY EXAMINER